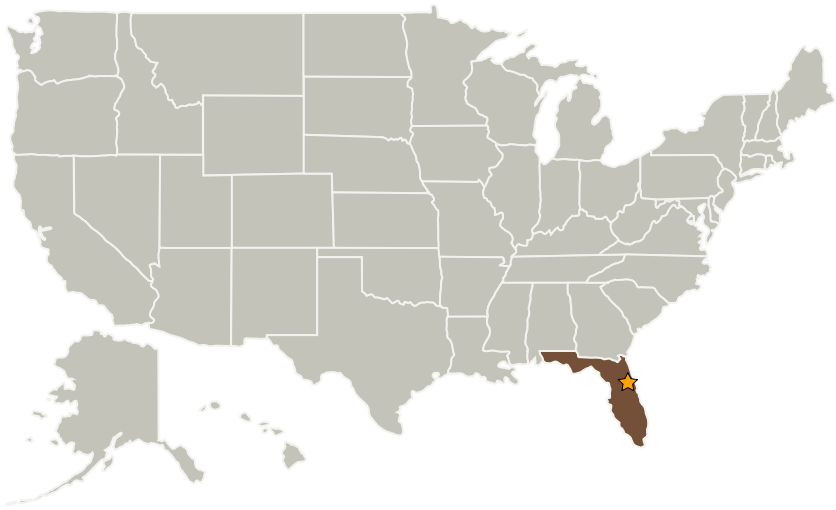
# Non-Pyrotechnic Latch and Release System for Aerospace and Other Applications, Phase II

Completed Technology Project (2006 - 2008)

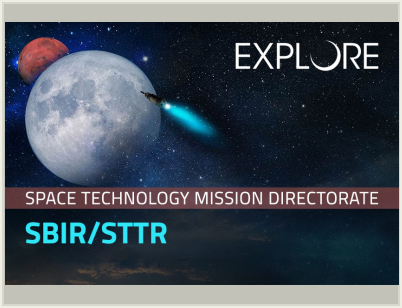
## Project Introduction

American remote Vision Company (ARVC) will continue to research and develop a new non-pryotechnic latch and release sytem for use in servicing and flight release applications, among others. We have built and demostrated prototypes from the 20 pound range to the 2000 pound range. The devices are force multipliers, where the force increases linearly with initial grip force, and exponentially with overall grip length. The prototypes are of two basic varieties (a) linear basket "fingercuff" grippers with actuation mechanisms, and (b) rotational grippers with actuation mechanisms. We have invented a method to precisely control both versions, for controlled release applications. The devices are simple, reliable, inherently reusable, nonfouling, and fault tolerant.

## Primary U.S. Work Locations and Key Partners



| Organizations Performing Work | Role | Type | Location |
|---|---|---|---|
| ★Kennedy Space Center(KSC) | Lead Organization | NASA Center | Kennedy Space Center, Florida |
| American Remote Vision Company | Supporting Organization | Industry | Florida |

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## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Center / Facility:**

Kennedy Space Center (KSC)

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

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| Primary U.S. Work Locations |
| --- |
| Florida |

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

## Technology Areas

**Primary:**

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
  - TX12.3 Mechanical Systems
    - TX12.3.8 Docking and Berthing Mechanisms and Fixtures